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# THE TORQUE•TUBE

THE NEWS PUBLICATION FOR MEMBERS

OF THE 1937-1938 BUICK CLUB • FOUNDED 1980



**Volume X • Number 6**



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Volume X; Number 6

April 1992

William E. Olson, Editor • 842 Mission Hills Lane, Columbus, Ohio 43235



## *Miscellaneous Matter*



I trust everyone will find this issue's cover appropriately dignified. Perhaps "sober" might be a better word, and I suspect that there are some among us who will consider it, after last month's venture into what used to be called "cheesecake," an altogether appropriate reminder concerning the wages of sin. (Romans, VI, 23.)

As of this writing (the third week of March), written communications to the Editor concerning the "Sandra" cover have run about 70% "yes" and 30% "no," but this is a very small sample — too small to be statistically reliable. People who are strongly opposed to something tend to be more vocal about it than those who are in favor or merely unconcerned. Thus, I suspect that if the entire membership were polled, there might be a smaller percentage of "nos," but there would also be a body of "don't know or don't care" — a category that seems to be included in most polls. I had hoped that something startling and controversial — and the color of the cover, called "Wild Fuchsia" by its producer, Simpson Paper Company, was chosen for its startle-factor — would jar more of you out of your apparent apathy, but I guess that was a vain hope.

It is highly unlikely that there will be any more Sandras in the foreseeable future, not because I have been chastened by the negative commentary, but simply because I doubt that any other members can, or would dare to, come up with similarly-staged photography. So, Sandra will pass into history, and I will have nothing further to say about the matter, except this: it appears that there are at least a few readers with whom I have, except for an interest in cars, very little in common.

Speaking of apathy, I need now to turn to a more serious subject. The level of contributions to this publication has once again diminished to something less than a trickle. If it were not for a few members, the recycling of some material from past issues, and a few pages I'd prepared for Issue 5 but had no room for, there would be very little to this issue — perhaps nothing. I have nothing saved for the next issue. I am tired of trying to figure out something new to write about, and I cannot create an

• FOUNDED BY DAVE LEWIS IN 1980 •



## • COVERS •



On the front cover is a nice-looking '38 sedan in an attractive setting. I took the picture out of my archives, and don't remember whose car it is. Anybody know? It has a Michigan license plate.

Buick supplied chassis-and-cowl units to several builders of hearse and ambulance bodies in the 1930s. (Three of these builders were located in Ohio: The Flxible Company of Loudonville; The A. J. Miller Company of Bellefontaine; and Sayers & Scovill of Cincinnati. The Eureka Company of Rock Falls, Illinois also used Buick for ambulances and hearses beginning in 1936.) Because any chassis would require modification -- the resulting vehicle was longer than even a 90-series car -- the builders typically used Century units, as they had the big engine but were less expensive than 80- or 90-series units. The photograph shows a 1938 Flxible hearse, which featured elaborate "carved" panels of cast aluminum applied to the sides and the rear door. If you look carefully you will see that there is a side door behind the driver's compartment; the hinges and door handle are concealed in the panels. The hood and cowl have been raised several inches to accommodate the higher body; note the configuration of the front door around the vent window, and that the lowest bar of the grille is well above bumper level. "Flxible" appears in Buick-like script on the hood lower panel. (Yes, that's how it's spelled -- without the "e". The company is still in business in Ohio and makes buses.) With their heavy bodies -- and a 400 or 500-pound casket within -- the hearses' performance was doubtless rather ponderous, but of course that did not matter as they were seldom driven over 25 or 30 MPH. (Thanks to David Bylsma (#117) for the photo.)

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entire issue of 28 or 32 pages out of my own head every four or five weeks ad infinitum. Greek mythology holds that Athena sprang full-grown and full-armored from the head of Zeus, but, contrary to what some of you might think, I am not Zeus. How about some more stories, technical tips, photos from you people? If there is not an improved response soon, I may just decide to retire, refund everyone's money, and set about living like a normal person instead of busting my butt trying to get this rag out every five weeks.

THIS IS NO IDLE THREAT!

### EASTERN CLUB MEET & TOUR: MAY 29 - JUNE 2

So far only a few people have signed up for the Meet in Flint and the Tour to Petoskey, Michigan to be held immediately following. Based upon past experience, I suppose this is not surprising; this Club, as most seem to, has its share of Last-Minute Louies. I will again warn everyone, however, that if registrations do not pick up in April, both events may be cancelled, as neither the organizers nor the Club will stick their financial necks out based merely on a hope that people will show up.



*Dan McLaughlin's (#466) '37 business coupe parked along the shore of Lake Michigan.*

Those that have participated in Club events in the past know that they are the most informative, most entertaining, most enjoyable antique-car functions you can possibly attend. I am not going to yell at everyone this time, but will simply say this: if you miss out, you will have missed a lot.

Dan McLaughlin (#466) has revised the Tour itinerary to some degree, and the Revised Itinerary appears herein. NOTE: If you are planning to go on the Tour, please send Dan \$20 forthwith. This is necessary to insure that the Lake Charlevoix Cruise boat will be reserved for us.

I AM LOOKING FORWARD TO SEEING MANY OF YOU AT THESE EVENTS!

TENTATIVE ITINERARY  
FOR THE 1992 TOUR

MAY 31, 1992

9:00 a.m. Leave Flint in I-75 north.

12:00 m. Arrive Grayling and eat lunch at \_\_\_\_\_.

1:00 p.m. Leave Grayling on I-75 north to M-93 and exit east to Hartwick Pines State Park. This is the last stand of virgin pine in Michigan. Visit displays and make walking tour of park. Entry fee \$2.50 per car.

2:30 p.m. Leave Hartwick Pines State Park west on M-93, returning to I-75. Turn north to Gaylord and then west on M-32 to US 131. Then north to Petoskey and to the Perry Hotel.

6:30 p.m. Dinner on your own.

8:00 p.m. Informal meeting in the hotel lounge, the Noggin Room.  
till ???

#### JUNE 1, 1992

10:00 a.m. Assemble in the hotel parking lot and drive east on US-31 approximately one mile to the intersection of US-131. US-31 turns right but continue straight ahead on US-131 six miles to the intersection of M-75 where there is a blinker light. Turn right on M-75, drive through the village of Walloon Lake to Boyne City, about six miles. Leave Boyne City on the southwest on Ferry Road. After eight miles you will come to the Ironton Ferry, fare \$1.50 per car.

Inasmuch as the ferry's capacity is four cars, the first cars across should wait at the side of the road for the others. When all have crossed continue through Ironton to M-66 and turn right, continuing the five miles into Charlevoix.

12:00 m. Park in the public parking lot behind City Hall on State Street, one block west of US-31.

12:15 p.m. Walk to the foot of E. Antrim Street (behind the Chamber of Commerce Building), and board Miss Charlevoix, for our lake cruise. Lunch will be served on board. Please be punctual as the boat will cast off promptly at 12:30. Fare is \$20 per person, which includes lunch.

3:00 p.m. The cruise should end about this time, after which we will drive in caravan north on US-31 to Petoskey.

3:30 p.m. Free time. You may wish to shop the Gaslight District or visit the Little Traverse Historical Museum, donation \$1.00 per person. The museum is located in the ex-Pere Maquette Railroad depot. Both are within walking distance from the hotel. Or use this time for whatever purpose you prefer.

6:30 p.m. Dinner on your own.

8:00 p.m. Informal meeting in the Noggin Room.  
till ???

#### JUNE 2, 1991

9:30 a.m. Assemble in hotel parking lot. Drive in caravan to US-31 east through Bay View and turn left on M-131. This intersection is just beyond Bay View. Follow M-131 north through Harbor Springs, Devil's Elbow, Middle Village, and Good Hart to Cross Village. Follow lead car on side trip to the beach for photo opportunities. After a brief stop we'll continue north from Cross Village on Shore Drive to Lakeview Road and turn right to Gill Road and then left on Cecil Bay Road then right on Wilderness Park Road to Mackinaw City.

12:00 m. Eat at Mackinaw City.



*An advance look at what you will see if you participate in the Club's Michigan Tour this June: this is the historic Perry Hotel in Petoskey, Michigan. (Photo by Dan McLaughlin (#466).)*

1:00 p.m. Leave Mackinaw City via US-23 east. Watch for Old Mill Creek State Park signs on the right about four miles down the road. This park features a reconstructed eighteenth century sawmill. Admission is \$3.25 per person.

??? Return to Petoskey when desired. Shortest route would be to return to Mackinaw City on US-23 and follow US-31 south through Carp Lake, Levering, Pellston, Brutus, Alanson, Conway, and Bay View.

6:30 p.m. Dinner in the private dining room at the Perry Hotel. After our meal we will enjoy conversation among good friends.

#### JUNE 3, 1992

8:00 a.m. Goodby. Depart for home. Hope you had a good time.  
till ???

## 1992 ROSTER

Once again we have had an exasperating time trying to put a Club Roster together. Jim Flack, (#499) our new Roster-Maker, went aground on the same shoal as did former Roster-Maker Steve Weinstein (#532): how to get the computer to sort the members by year and model number of cars(s) owned. The major difficulty with this arises out of the fact that some members have more than one car. I formerly believed that computers could process information in any and all conceivable forms, but am now — temporarily at least — disillusioned. I believe that Jim will eventually find a solution to this problem; inasmuch, however, as the solution had not appeared by mid-March, and there was no clear indication of when it might appear, I decided to get out a Roster in the best form presently obtainable. I did this for two reasons: (1) I normally reserve time in February to work on the Roster, but February is over, and I do not have time after April 1 to do that and the regular Torque Tube issues — that is, without seriously comprising my "real" work, for which I get paid, or vacation time; and (2) I did not wish to run the risk of putting out a Roster that is nearly obsolete on the day of its issue. So, for the 1992 Roster I have simply repeated the 1991 list of members by year and model number, which Steve Weinstein compiled and entered laboriously "by hand," so to say, some fourteen months ago. In terms of the present membership, this '91 list is probably two-thirds or more accurate, and thus seems clearly better than no list at all. If we can get an accurate '92 list in the near future, I may put that in a future Torque Tube issue.

All of this is by way of explanation, and not of apology. Jim Flack and I have both done the best we could under the circumstances, and I will remind everyone that Jim was the only member to volunteer for the Roster work. I will also remind everyone that: (1) this is an "amateur," "spare-time" operation for which no one gets paid; and (2) the Buick Club of America, whose resources are presumably greater than mine, has yet to come up with a roster that lists members by cars owned.

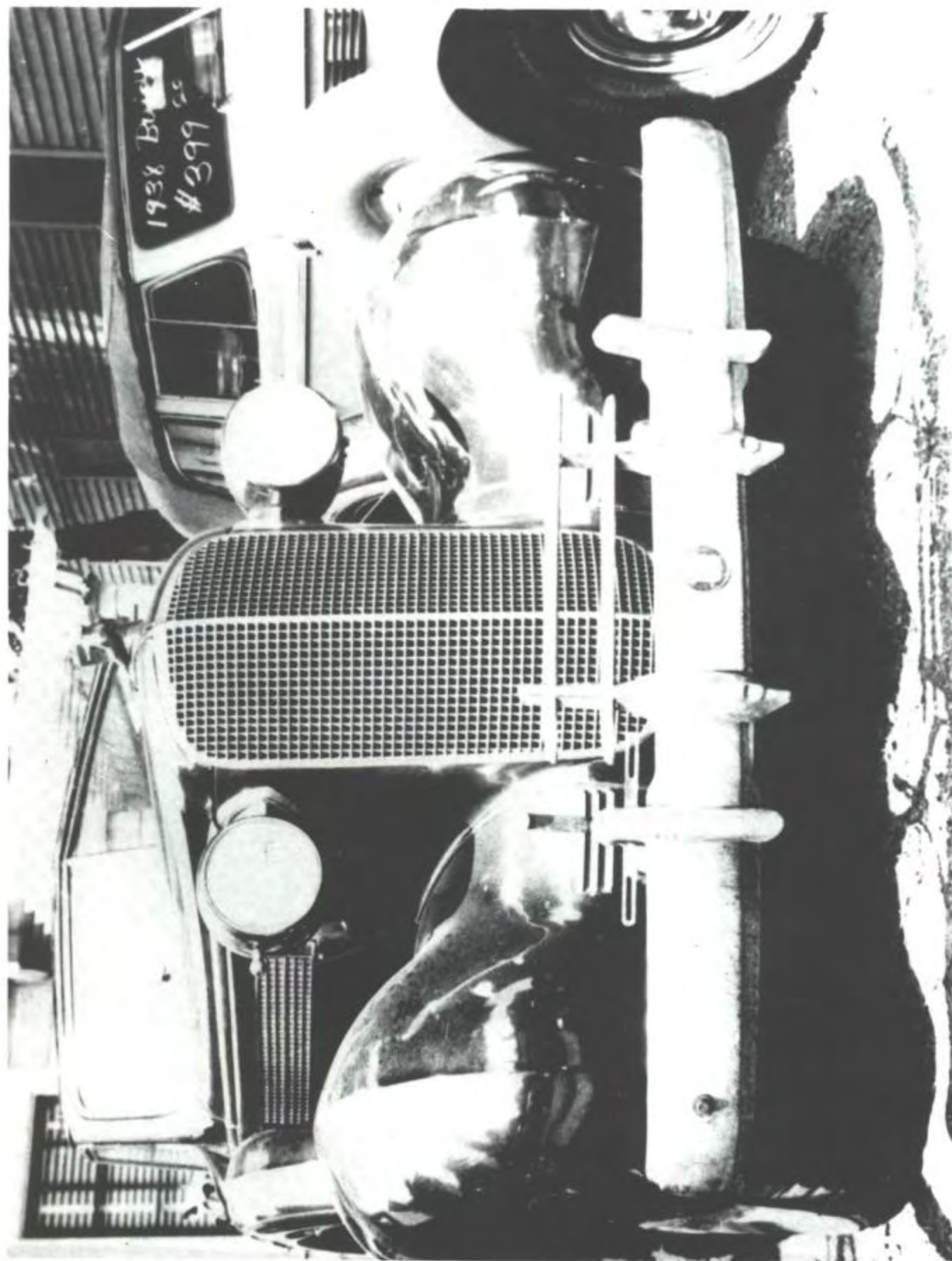
The new Roster will be sent out concurrently with this issue, if not before.

## GASOLINE BLUES?

Next time you "fill 'er up" and watch the numbers pile up in the "dollars" window on the pump, consider this: according to Cambridge Energy Research Associates and General Motors Acceptance Corporation (whom I have the privilege of paying every month), the "good old days" of cheap gasoline are now. In 1947 a gallon of gas averaged 23¢; in today's dollars, adjusted for inflation, that 23¢ is equivalent to \$1.49. Unleaded regular is running around \$1.10 in Ohio at present. Although I can't say for sure, I suspect that the percentage of the pump price given over to taxes today is greater than it was 45 years ago, which, if true, of course means that the refiner and station operator get a smaller piece of the \$1.10 than they got of the 23¢. Maybe the Big Oil Boys ain't so bad, after all.

### OPPOSITE PAGE - "RETURN WITH US NOW..."

Curt Brohard (#554) sent in this rather grainy old photo, which he picked up at a California swap meet. The place and time are not known, but I suppose it could be anywhere from the late 1940s into perhaps the early '60s. There seems little or nothing to be said of such scenes that has not been said many times before. Perhaps one of us now owns that '38; perhaps it's gone.





#### BUTCKS IN SWEDEN

Two 1937 models owned by Leif Lundin (#933) of Borrby, Sweden. The Special plain-back sedan (model 47) is flying the blue-and-yellow Swedish flag. The work-in-progress Century appears to have a custom European convertible sedan body. Both have left-hand drive, although I believe that at one time the Swedes drove on the left, and the Norwegians on the right, which made for a bit of complexity at the border crossings. (I think all of continental Europe -- i.e. everybody but the Brits, Scots and Irish -- now drives on the right.) Leif is a sail-maker, an occupation which may stand him in good stead when the time comes to make a new top for the Century.





## *A Report from South Africa*



# ● **BLACK BESS** ●

By Murray Webb (#873)  
Benmore, South Africa

### 1. BUICK IN SOUTH AFRICA

South Africa was until 1961 a member of the British Commonwealth. Despite the strong traditional British links, American cars were very popular from the very early days until the late '50s when their popularity waned, and thereafter they disappeared from the scene other than on special import. Today there are no more American assembly plants and the only vehicles manufactured locally are German or Japanese based.

In their heyday, American cars were popular because of a proven track record of ruggedness and reliability. Pictures of the South African troops capturing German West Africa (now Namibia) in the First World War show a wide assortment of commandeered American cars, mainly Model Ts, but with a fair sprinkling of Buicks.

During the '20s and '30s all major U.S. manufacturers established assembly plants. Prior to the Second World War, the General Motors plant in Port Elizabeth assembled most of the standard production models of GM products including Buicks. In 1939, with the advent of the Second World War, all assembly plants went onto a war footing and no passenger vehicles for civilian use were produced until after the cessation of hostilities.

Today, although there is no official Buick Club in South Africa, there are a number of Buicks from way back until the 1950s in various degrees of restoration. There are about twenty 1937 and 1938 models in attendance at shows, so presumably there must be quite a few more about.

### 2. THE ARRIVAL OF BLACK BESS

I own a couple of Buicks but was desirous of finding a latter-day Al Capone Special, so to speak. In particular, I wanted a Buick from the years 1936 to 1939. I heard about a 1937 Buick for sale in the Northern Suburbs of Johannesburg, about 20 kilometers from where I live. I called around at the owner's house, where I found in his garage a 1937 Series 90 Limited. It was neglected, but not abused and, most important, it was complete. I decided to buy the car there and then, especially as several other people were interested in it. I gave the man a cheque (\*1) and left my car as collateral until the cheque had been cleared. The owner had just been out to fill the car with petrol (\*2) and assured me it was in a driveable condition. I told him I wanted to drive it away there and then and would collect my car when the cheque had been cleared. He looked at me in a rather strange way, disappeared into his garage, and returned with a can of oil and a very large can of water. I had the feeling at this stage that he knew something that I didn't, but decided to press on regardless. I started the car and proceeded cautiously in the direction of home. While driving the car I recalled a note in a book of collectible cars which mentioned that the 1937 Series 90 had "ponderous road manners", and they seemed ponderous enough; indeed the car seemed to weave and lurch all over the road.

However, all was going well until I had to make a fairly quick stop at a set of robots (\*3). It was here that I learned to my chagrin that both the brakes and the steering were less than satisfactory, if not downright dangerous. However, these problems paled into insignificance compared to what was to follow and which was the obvious reason for the can of oil and the can of water. I noticed the temperature gauge rising steadily. This was in September, which is the start of spring in South Africa, and being a Saturday morning a lot of people were in their front gardens watering the plants. I pulled into a nearby house where the man watering the garden was kind enough to point his hose at my radiator, which cooled that down, after which we added some water and about a litre of oil and I was on my way again. After repeating this process every couple of kilometers, I eventually arrived home with clouds of smoke and a lot of hissing and gurgling being emitted from the engine. But, anyway, I was home and I had the car, which the children promptly named "Black Bess".

### 3. HISTORY OF THE CAR

This particular car has an interesting history. In 1937 the De Beers Consolidated Diamond Mines in Kimberley in the North West Cape Province purchased two Buick Series 90 Limousines for use by their Directors. One was green and the other was blue. The green one was allocated to Mr. H. P. Rudd whose father, Charles Rudd, along with John Cecil Rhodes was one of the founders of De Beers (\*4). He used this car from 1937 until 1953. I have managed to peruse his family's photo albums and there are many pictures of the vehicle in evocative settings of the 1930s and '40s. Unfortunately, none of these are suitable for reproduction. The number plate of the car was CC 1, which is the number plate normally allocated to the Mayor of Kimberley, but with the power of De Beers, I don't think that the Mayor stood a chance.

In 1953 both cars were sold to a resident of Kimberley. The gentleman used the green one and his wife the blue one. At the end of the '50s he sold both of them. The green one went to a small village in the Western Transvaal to be used as a taxi and the blue one was sold to a farmer who used it as a tractor. It might seem like sacrilege to use a Buick Series 90 as a tractor, but I suppose in those days it was merely a used car and, in any case, I presume it made a wonderful tractor. The green one then passed through two more owners before being purchased by an Accountant in Johannesburg. He owned it for approximately 10 years, but from the log book it would appear that he only used it about ten times. This was then the car that I now owned.

From the I.D. plate the car was produced in early 1937. The original colour was Coronary Green with mahogany wood graining and it had tan leather upholstery. The car has right-hand drive. On investigating the history of the vehicle, I learned that very little in terms of restoration had ever been done to the car. It had been repainted black at some stage and, in addition, it had a pleasing dark green upholstery.

Everything appeared to be there and working, although very worn indeed.

### 4. RESTORATION IN SOUTH AFRICA

South Africa's main industry is based around the mining of her rich mineral deposits discovered in the interior of the country. The majority of the population therefore live in this interior region.

Generally speaking this is a relatively dry and arid area, with low humidity. Winters are cool, but there is no snow and therefore no salt or chemicals on the road. Thus it has to be an ideal situation for finding old cars in that the bodywork is generally intact, and the car I had just purchased had no rust of any description other than a little bit of surface rust here and there where the paintwork had chipped off.

The major focus of restoration in South Africa is on British cars and their value is underpinned by their export potential to Britain and to a lesser extent Australia, because these countries drive on the left-hand side of the road. As a result the Jags, Bentleys, Morgans, MGs, etc. have been finding their way out of South Africa to Britain. With the American cars, however, it is another story. There is little relationship between the South African value for a restored vehicle and the American value due to the fact that most of our cars have right-hand drive.



*Right-hand drive in a '38. This particular example is a Canadian car. The dash panel and garnish moldings appear to be painted gray, rather than woodgrain, but it is not known whether or not that is original. (Photo courtesy of David Bylsma (#117).)*

## 5. CONCLUSION

In due course I will submit a further article on the restoration process of the car, which I had intended to complete in 1991. However, at the rate I'm going, it will probably be the year 2022 when you get to read it. The restoration of the vehicle has been an object lesson in how to make a small fortune. That is to say, you take a large fortune, have three attempts at each phase of restoration before getting it right, and then you have a small fortune.

\* Glossary: (To convert South African-English to American-English)

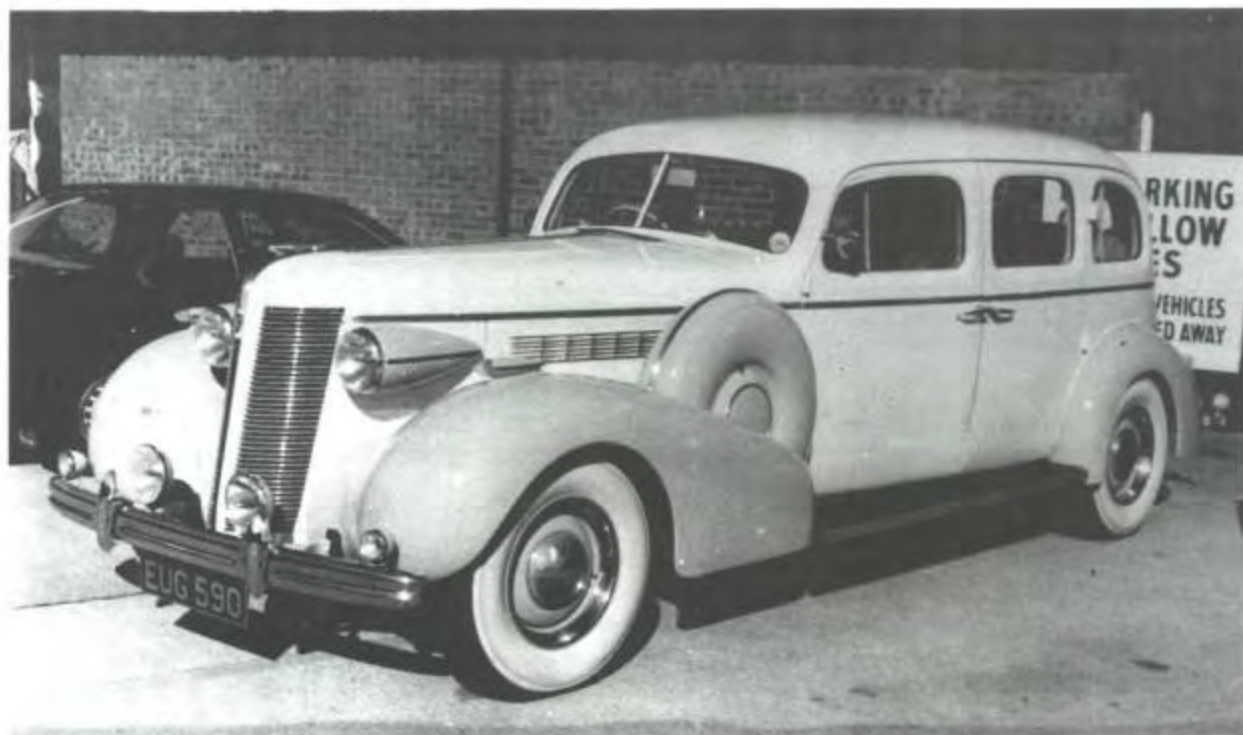
\*1 Cheque = Check

\*2 Petrol = Gas

\*3 Robots = Traffic Lights

\*4 De Beers = During the 1870s John Cecil Rhodes and Charles Rudd started buying up all the small claims in the Kimberley diamond fields and formed De Beers Consolidated Mines. Within a short period of time they became a virtual monopoly and to this day De Beers controls 85% of the world's diamond sales.

EDITOR'S NOTE: Our thanks to Murray Webb for an entertaining story. It is plainly easier in South Africa to trace the history of a car than in the U.S., and Murray's Limited has certainly had what might be called a "checkered career." It is heartening to know that eventually it will be returned to the splendor it once had as a conveyance for the King of Diamonds. As we all know, the Republic of South Africa has been much in the news over the past several years. This Club, and the BCA, have given me a view of South Africans that one cannot get from reading the newspapers. Those of its citizens that I have met or with whom I have corresponded are engaging fellows, going about their business just like all of us, and the antique-car fraternity (a word I use here not as gender-specific) in South Africa and Zimbabwe (once called Rhodesia) is strong: one character I met a few years ago owns some 45 General Motors cars! I hope we will hear from Murray Webb again before 2022.



Another right-hand drive car. This is the 1937 McLaughlin-Buick Limited owned by Derek and Kate Hodgett (#690) of Nottingham, England. The car was originally registered in England as a Buick "Ambassador." (See Vol. IX, No. 5)

# *Those Cryptic Octane Numbers Explained*

By John Huffman (#623) and the Editor

Once upon a time, when men wore raccoon coats, and ladies bobbed their hair and rolled their stockings, Buicks had six cylinders and a compression ratio of around 5 to 1 or less. Why such a low compression ratio? Automotive engineers of the 1920's knew that higher compression ratios would give more power and better mileage, but they also knew that most of the gasolines of that era would cause increased knocking at higher ratios. In 1928 the average compression ratio for American automobiles was 4.9 to 1.

The kind of knocking we're talking about is not the dreaded clatter of a bad rod bearing, but is a pinging or chuckling noise caused by poor fuel (or a poorly tuned engine). The gasolines of 65 years ago caused knocking by preignition of the fuel in the cylinder, before the spark plug fired. Remember, during the compression stroke of a gasoline engine, a mixture of gasoline vapor and air is compressed until just before the piston reaches the top of the stroke. (How much before is determined by how far advanced the timing is set and how much additional advance is imparted by the centrifugal and vacuum advances). At the appropriate time, the plug fires and if all goes well the gasoline-air mixture burns rapidly and smoothly to give a large volume of gaseous combustion products plus energy which drives the piston down, turns the crank, etc.

This is an ideal situation with a well-tuned engine and high quality gasoline. With lower-quality fuels, the heat generated during the compression stroke, combined with the heat of the cylinder walls, can cause the gasoline-air mixture to ignite prematurely (sort of like the principle of a diesel engine) in a small explosion. The sound of these mini-explosions is knocking, and the force of these explosions does nothing good for internal mechanical parts.

The obvious answer to the problem was apparent to the automotive engineers of the 1920's; better gasoline. But there was a problem. Most gasoline (70% in 1922) was so-called "straight-run" gasoline obtained by direct distillation of crude oil. Scientists of that era knew that this stuff was a mixture of saturated hydrocarbons, but given the laboratory technology of 1925, there was no way to analyze these mixtures. Not only that, the composition of straight-run gasoline varies greatly depending on the source of the crude oil. For some idea of the complexity of the problem facing the early petroleum chemist, if one assumes that straight-run gasoline consists of a mixture of so-called saturated hydrocarbons containing six to nine carbon atoms, there could be up to 67 different hydrocarbons in a given sample of straight-run gasoline. These natural gasolines contain a variety of other hydrocarbons and are usually complex mixtures of substances which have almost identical properties. Until around 1960 or so, there was simply no way to accurately analyze these mixtures and the exact composition of gasoline was simply an unapproachable problem. (As the name suggests, all hydrocarbons are organic compounds of carbon and hydrogen. These two elements can combine with each other in a wide variety of ways, forming several series of molecules with differing properties, depending upon the number of atoms of each element and the structure of the molecule: i.e., how the atoms are arranged in it. Methane, called "marsh gas" or "fire damp" by our ancestors, a colorless, odorless and explosive gas that was the bane of early underground coal miners, consists of one carbon and four hydrogen atoms and is the first member of the methane or paraffin series of hydrocarbons. Other members of this series have the same relation between the number of carbon and hydrogen atoms. Methane is a very simple hydrocarbon. These of you who studied

organic chemistry may remember the "benzene ring." Benzene is an "aromatic" liquid, the molecules of which are made up of six carbon atoms arranged in a ring, with one hydrogen atom attached to each. This is the first member of the benzene series; again a simple hydrocarbon. Toluene, often used as a solvent, is another member of the benzene series, but more complex in molecular structure. Many hydrocarbon compounds have highly complex structures.)

Some attempts had been made to rate gasolines during the years from 1915 to 1930, but the usual method was based on boiling point, which simply didn't work. A couple of discoveries were made in this era. First, it was known that aromatic compounds (benzene, toluene) would improve gasoline. If you are up on environmental hazards you will realize that these are nasty materials, but they are still used in unleaded fuels. In 1926 a report appeared to the effect that adding 10% dry ethyl alcohol to low-grade gasoline gave more power and less knocking. (Early "gasahol": there is nothing new under the sun). Also in 1926, one T. Midgely, working at the General Motors Institute, found that adding small amounts of tetraethyl lead decreased knocking. This, of course, was the beginning of the idea of leaded gas. Finally, in the late 1920's, in work reported in the "Oil and Gas Journal" for 1930, two engineers at the University of Michigan, G. G. Brown and H. E. Zuck, devised a clever approach to rating gasoline. They realized that there was no way of analyzing gasoline, so they decided to use various pure saturated hydrocarbons in a test engine under controlled conditions. They found that of the substances they tried, one, normal heptane ( $C_7H_{16}$ ), gave the poorest performance and another, "isooctane" (2,2,4-trimethylpentane,  $C_8H_{18}$ ), gave the best. Heptane was then given a rating of zero and isooctane a rating of 100 and the "octane scale" was born. A mixture of 90% isooctane and 10% heptane was referred to as "90 octane" in terms of its performance in a test engine.

The octane rating system as applied to the complex mixtures which are gasoline simply means that if a gasoline performs in a test engine like a mixture of 88% isooctane and 12% heptane, it is labelled "88 octane". After the development of the octane rating system, various straight-run gasolines were checked and found to vary from 20 to 73 octane.

Following the development of the octane scale, a variety of techniques were developed for enhancing the octane rating of petroleum products, some of which used other fractions of crude oil. These techniques include catalytic cracking, isomerization, reforming and the use of additives. Cracking, isomerization, and reforming are chemical transformations which rearrange the atoms of crude oil into arrangements which make better gasoline.

The best known additive is tetraethyl lead, which was added as "Ethyl Fluid" to gasoline for many years. Ethyl Fluid was a mixture of tetraethyl lead and ethylene dibromide. (Remember EDB, the toxic junk used to fumigate fruit?) The role of the ethylene dibromide is to convert the lead oxide, formed on combustion of tetraethyl lead, to lead bromide which is volatile and goes out with the exhaust gases. (Yes, that means you get to inhale lead vapors, which are definitely not good for you.)

During the 1937-38 era, Buick made some mechanical changes to minimize knocking, or preignition. Cylinder walls were made thinner to permit better heat exchange in an effort to keep internal temperatures down, but the major change was in piston design. The pistons in a 1937 Buick engine, with a compression ratio of 5.7 to one in the series 40 engines, have a flat top. In 1938, Buick introduced the "Turbulator Piston" which is a semi-domed affair that Buick used with only minor changes through the end of the straight-eight era. This redesigned piston gave increased compression ratios (author's note: I can't find a figure) and promoted smoother combustion, with less knocking.

A special test engine is still used to determine "octane numbers," under carefully-controlled laboratory conditions. Using heptane and isooctane as reference fuels, it would seem possible to use any engine to conduct knock tests. Variations from one production engine to the next, however, have been shown to affect the accuracy of the tests, in some cases significantly. Requirements for knock testing are established by the American Society for Testing and Materials (ASTM), and the engine used in such testing is known as the ASTM-CFR, produced by Waukesha Motors in Wisconsin. It has a single cylinder with overhead valves and a three-bowl carburetor. The compression ratio can be varied while the engine is running by raising or lowering the cylinder head in relation to the crankcase. One bowl of the carb holds heptane, the second isooctane, and the third the fuel to be tested. The tests are conducted over various engine speeds and air-fuel ratios.

Actually, there are two prescribed octane tests using the CFR engine: one gives the "Motor Octane Number" (MON) and the other the "Research Octane Number" (RON). The octane number or "anti-knock index" posted on gas pumps is the average of the fuel's MON and RON.

To summarize, the octane scale is not so cryptic. It is simply a performance test of gasoline in which it is measured against the performance of mixtures of two standards (heptane and isooctane). The gasoline need not contain any isooctane or heptane, but is rated by its performance relative to the performance of mixtures of the two standards.

*EDITOR'S NOTE: John Huffman is Professor of Chemistry at Clemson University, and thus well-qualified to discourse on hydrocarbons. My additions to the foregoing article were small, and mainly cribbed from MOTOR Auto Engines and Electrical Systems and the encyclopedia. I did OK in high school chemistry, but came early to grief at Semi-Micro Qualitative Analysis before the conclusion my first college semester, thus ending a foolish ambition I then held to become a chemical engineer, and beginning my life-long awe of professional chemists.*





# TECHNICAL TIPS



## A SEMI-BRIEF DISCOURSE ON REAR ENDS

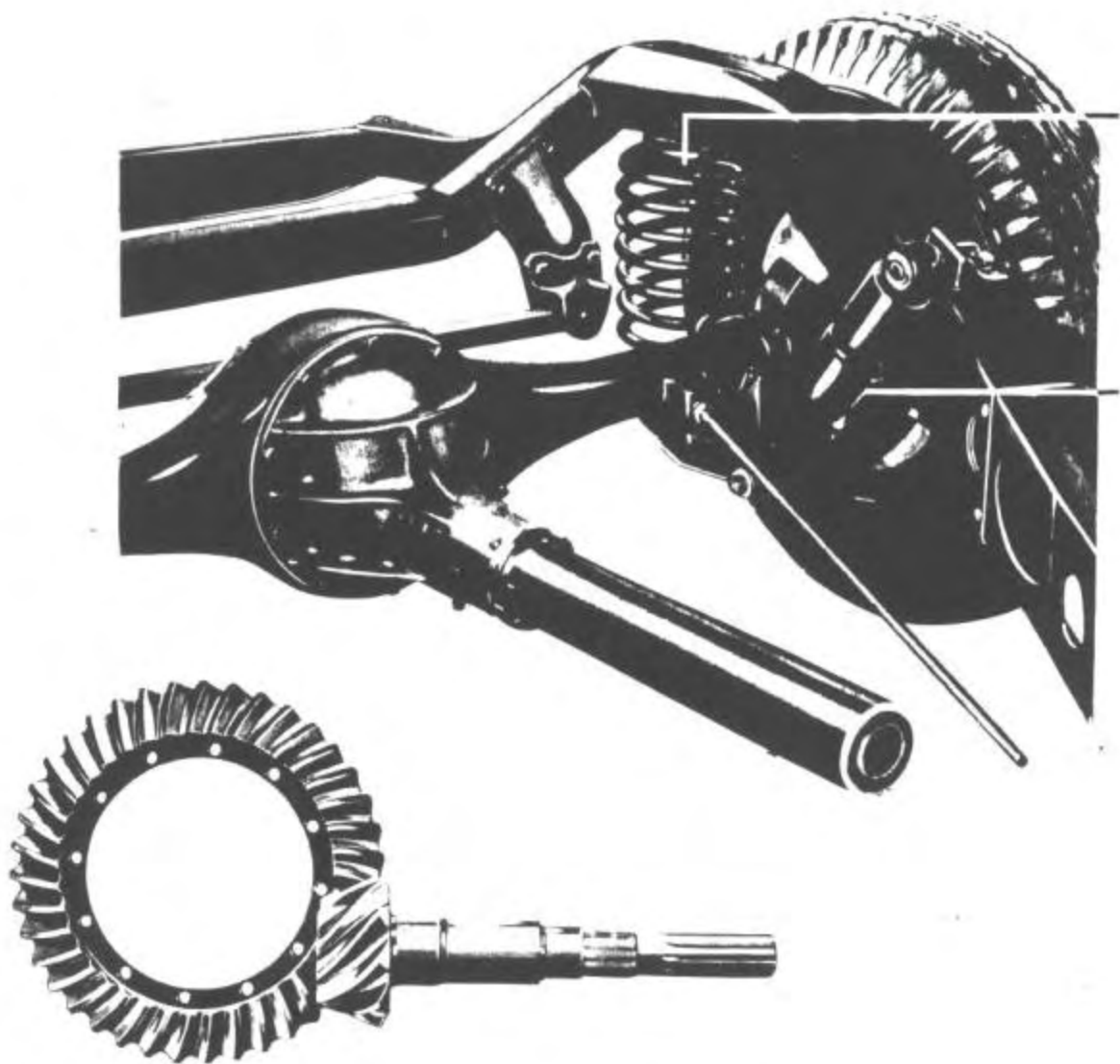
It is time once again for my annual lecture about rear-end ratios. Before coming to that however, let us deal with rear ends generally, "hypoid" and non-"hypoid" gears, and a peculiarity of the 1937 80 and 90-series cars, as distinguished from all other '37 and '38 Buicks.

If cars always went straight ahead, the necessity for converting the rotating motion of the fore-and-aft propellor shaft to rotating motion of the side-to-side axle shaft could be accomplished by a simple set of bevel gears. If you don't know what bevel gears are, take a look at an ordinary hand drill. The big ring gear that you turn with the crank transmits its motion to the main shaft of the drill by gear teeth that are bevelled -- i.e. cut at an angle. The big ring gear has about five times as many teeth as the smaller gears, which multiplies the turning speed of the drill. (If the set-up were reversed, the gearing would decrease speed and multiply turning force, or torque, but with a hand drill speed is what is needed; the user's arm provides more than enough torque to get the job done, but not enough speed.)

However, cars do not always go straight ahead, and when they turn the outside rear wheel must travel farther than the inside wheel. To compensate for this, we have the more complex set of differential gears, which permit a speed differential between two independent axle shafts. I cannot really explain how these work, and for present purposes it does not matter.

Returning for a moment to our hand drill, it will be seen that in an automotive rear end, the gear set-up is the reverse of the drill. We do not need to multiply speed; we need to multiply tractive effort, and a vehicle in which the driving and driven gears in the rear end have the same number of teeth would not work at all, or would require a monster transmission to accommodate gears large enough to achieve the equivalent torque multiplication. (I am speaking here of clutch-and-sliding-gear transmissions; modern automatic transmissions multiply torque in a different way, and we will allude to that later in this article.)

Early cars used simple bevel gears in their rear ends. This type of gearset is easy to adjust for correct mesh, and requires no more sophisticated lubricant than some kind of heavy mineral oil or semi-fluid grease. Advances in gear-cutting machinery and better lubricants permitted the introduction of spiral bevel gears, which are quieter-running and longer-wearing, but which must be made and adjusted in position more precisely. Simple bevel gears are cut "straight": i.e., each tooth is aligned with a radius of the circle formed by the diameter of the gear. Spiral gears are cut so that the teeth are aligned with arcs that intersect the diameter: that is to say, each tooth is curved.



*Illustrations from 1938 sales brochure show hypoid rear end configuration.*

The small driving gear on the end of the propeller shaft is called a pinion (taken from French "pignon" and earlier Latin words meaning "comb"). A pinion is "any small toothed wheel turning against a greater one and giving or getting motion from the push of the teeth as they come, one after another, into the spaces between the teeth on the other wheel." (Basic Dictionary of Science, Macmillan, 1965.) The teeth of the pinion mesh with teeth of a larger circular gear called the ring, which is mounted inside the differential case parallel to the axis of the car.

A variation on the spiral bevel-gear set-up is the hypoid rear end. (The prefix "hypo," taken from the Greek, means, among other things, "under" or "lower than," and the word "hypoid" is a shortening of "hyperboloid," which describes a certain kind of structure in solid geometry. Cf. "hyperbola," the figure obtained by slicing a cone diagonally.) In the hypoid rear end, the pinion and the ring mesh, not at the center-line

of the ring on a plane parallel to the road surface, as was the case with the older gearsets, but at a lower point. This allows the floor of the car to be lowered without the necessity of a highly-protruding "hump" in the floor. These gears must be machined, and positioned in the rear end, with great precision, and require special hypoid, or "extreme-pressure," gear oil.

Buick introduced hypoid ring and pinion gearsets in 1937, on 40 and 60-series cars only; 80 and 90-series cars used the older style spiral-bevel gears found on all 1936 models. (See the excerpt from the 1937 Service Presentation Program notebook included with this article.) This enabled the floor of the Special and Century body to be lowered 1-3/4 inches, as compared with the 1936 body. In 1938, all models had hypoid rear ends.

Some people seem mystified by rear-end ratios. These are usually expressed as proportions of some number to one: thus, e.g., a '37 Special has a rear-end ratio of 4.4:1; a '37 Roadmaster 4.222:1; a '38 Roadmaster 4.182:1, etc. All this means is that if one divides the number of teeth in the ring gear by the number of teeth in the pinion, one gets the first number. Thus, in a '37 Special there are 44 teeth in the ring and 10 in the pinion; in the '38 Roadmaster 46 and 11, etc. Stated another way, the pinion makes approximately four revolutions for every one revolution of the ring. (Likewise, in high gear, in which there is no gear reduction in the transmission, the rear wheel makes approximately one revolution for every four revolutions of the engine's crankshaft.)

From the facts set forth above, concerning hypoid and non-hypoid rear ends, and a brief look through a Master Chassis Parts Book, several observations may be made.

(1) '37 80- and 90-series rear ends are significantly different from '38 80- and 90-series rear ends, and every person reading this should refrain in future from asking me whether '38 and later 80 or 90 ring and pinion sets will work in a '37: they won't. (Some 80 and 90-series rear end parts will, however, interchange between '37 and '38.)

(2) If you have a '37 80-series car, and you need a rear end, or parts thereof, you can use '36. '36 and '37 rear ends are exactly the same. ('36 and '37 90-series rear ends are very similar, but not altogether identical. There appear to be some differences, however, between 1936 60- and 80-series rear axles, axle housings, and oil seals, and the same parts for '37. An entire '36 Century or Roadmaster rear axle assembly, from brake drum to brake drum, would very likely fit a '37 Roadmaster, but one would need to bear in mind the internal differences. The '37 has an improved oil seal.)

(3) If you have a '37 Roadmaster, and would like to change the rear-end ratio from 4.222:1 to 3.9:1, you can substitute a '36 Century ring and pinion set — if you can find one, which is not terribly likely. This modification will give fewer engine revolutions at "cruising speed," but low-speed performance in high gear and hill-climbing will suffer somewhat.

\* \* \* \* \*

O.K., with all of that knowledge under your belt, you are ready for the lecture, which is directed primarily at 40-series owners.



# REAR AXLE 40-60 SERIES

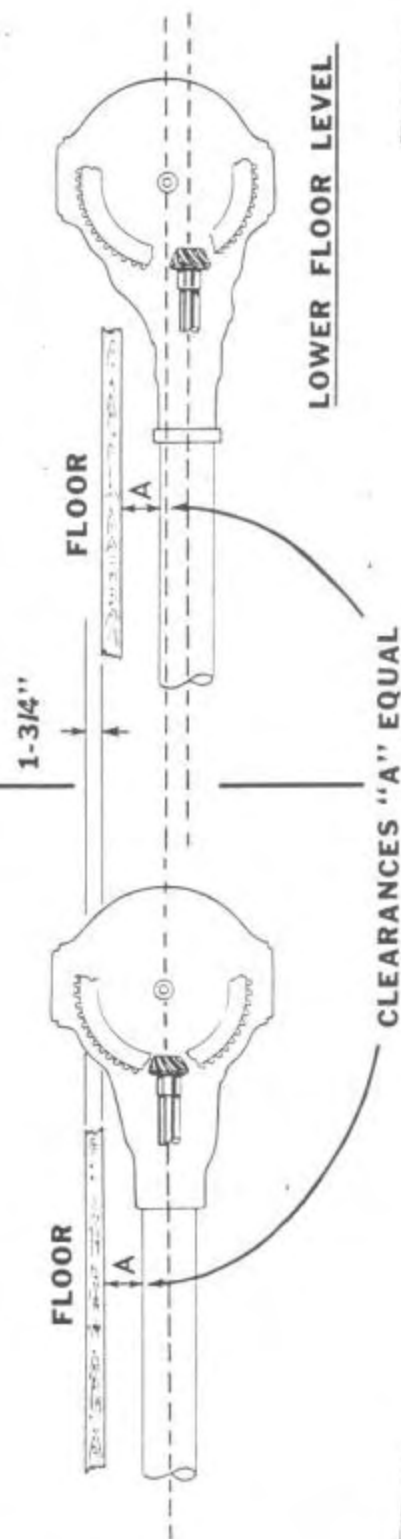
1936

BUICK

1937

**SPIRAL BEVEL**  
(CONVENTIONAL TYPE)

**SPIRAL BEVEL**  
(HYPOID TYPE)



90 } +1% DUPONT  
160 } BASE  
FOR BREAK IN

REGULAR  
LUBRICANT FOR REFILL



SAE 90 } +2% DUPONT  
SAE 160 } BASE  
FOR BREAK IN

MILD COMMERCIAL E.P.  
LUBRICANT FOR REFILL

Chart from 1937 Buick Service Presentation Program notebook. (This book contains outline notes for a one-day presentation to District Managers and Dealer Service Managers on features of the 1937 models.)

## Rear End Blues?

Once every six months or so, I get a letter from a new member asking — sometimes in anguished tones — what is wrong with his car. At 45, or 50, or 55 MPH, if the poor fellow has dared to go that fast, it sounds as though the engine is revving so fast that it will blow up any minute. How can he drive this car in modern traffic? — it can't possibly last more than a few weeks. Almost invariably, these despairing souls are 40-series owners, and they have never had a comparable antique car before. My answer is always the same: there is nothing wrong with your car; do not be afraid; go out and enjoy it. It is not a modern car, it does not behave like a modern car, and, after all, isn't experiencing the character of a 1930s vehicle what this is all about? (If you want something that looks like an antique car, or more-or-less like one, but drives like a modern car, then maybe you should be into STR\_\_T R\_DS, as, indeed, some of our members are.)

People who are used to modern cars with four-speed automatic or five-speed manual transmissions and rear-end ratios around 3.0:1 will, in most cases, find that driving a 55-year-old car at highway speed takes a bit of getting used to. Let us compare for a moment three vehicles I am used to driving — a 1987 Mercury Sable, a 1992 Chevrolet pickup with 350 V-8 and 3.42:1 rear end, and a 1987 VW Jetta — with a 1937 Buick Special with the standard 4.4:1 rear end. Each of the modern cars has an automatic transmission, the first two four-speed and the VW three-speed; each has a tachometer.

### Engine RPM at 55 MPH

Mercury Sable	approx. 1900
Chevrolet truck	approx. 1800
VW Jetta	approx. 2900
'37 Special	approx. 2900

If one is used to driving the first two, it is easy enough to see that driving the '37 might be a bit disconcerting at first: 1000 more RPM at the same speed. (The VW makes an interesting comparison; although it is obviously a very much different car than a '37 Special, the RPM at 55 is exactly the same.) Modern cars with four-speed automatics can be built with relatively "high" final-drive ratios (in the range of 3.0:1) because the transmissions multiply torque, not only in their gearsets, but also, hydraulically, in their torque converters. Moreover, one need not be concerned with a lot of gear-shifting — a point I will return to later. For those who don't mind gear-shifting, the five-speed manual car will typically have a "lower" rear-end or final-drive ratio, but fifth gear is an overdrive, not "direct" (1:1) as is "high" in the '37, but more like 0.8:1, achieving a comparable result. So, modern cars can "loaf along" at highway speeds, which gives longer engine life and — more important to their designers — greater fuel economy, to meet the dreaded "CAFE" (Corporate Average Fuel Economy) standards our Elected Representatives have in their wisdom laid down.

Another thing which may disconcert the first-time antique car owner is noise. Modern cars, even the inexpensive ones, are a good deal quieter: there is less wind noise, and much less engine and drive-line noise. The increased noise level over what one is used to can add significantly to the illusion that the engine is being overworked.

Can one safely drive a '37 or '38 Special (or any '37 or '38 model) at, say, 60 MPH for three or four, or even more, hours at a stretch? Assuming the engine is in half-way decent condition, my answer is an unqualified YES. Just do it. It will not blow up. In truth, I have never heard of any Buick straight-eight blowing up. One of our members has been drag-racing a '37 Century for many years; the engine has its original

babbitt-metal rod bearings, and it has not blown up despite being pushed way beyond what most of us would consider doing. (I am not talking about abuse or downright madness here: if, say, you repeatedly shift into second at 60 MPH and then pop the clutch, you will doubtless break something before very long.) As an educated guess, I would say that the upper limit of a '37 or '38 engine in good condition is around 4200 RPM. At that level, a 40-series car is going about 80 MPH, a 60-series somewhere in the 90s, and 80- and 90-series cars 85-90 MPH. Beyond that, or perhaps slightly before it, I would expect the valves to "float," bringing further attempts at increased speed to a halt. Can you drive your car all day at 80 MPH? Who knows! Presumably, few if any of us are going to try, and it would take a better man than I to do it. (I hit about a true 70 MPH once in my Roadmaster, but thoughts about its brakes, suspension, tube-type tires, and sheer size caused me to back off quickly.) The point is not "How fast can you go?" but "Can you go fast enough to keep up with the modern world?" My answer is yes.

I had a '37 Special at one time, and was never bothered by its highway-speed performance; I was more troubled by trying to see out the back than anything else. It ran well at 55 or 60 MPH, and so did Cecil Don's '37 model 44 I drove in California last summer. Perhaps I am simply more used to this kind of performance than others may be. At one time I had a '74 Volvo station wagon, and it was about the same with a 4.4:1 rear end and no overdrive: one just had to get used to the noise.

\* \* \* \* \*

Why were cars made that way in the 1930s? There are several answers. There were far fewer roads on which anything much above 45 MPH was possible. That was the speed limit on the Westchester County, New York "parkways" when I was a boy, and those were first-line roads. Most drivers did not care for gear-shifting; they were not "hobbyists" or "enthusiasts" after all, just average people who wanted to get somewhere as easily and comfortably as possible. Thus, cars were sold on their ability to accelerate smoothly from low speeds in high, with a minimum of gear-change. The average driver much preferred a car that would pick up smoothly from 12 or 15 MPH, or go around a corner or climb a hill, without down-shifting, than one that would loaf along at 60 MPH. Thus, engines, transmissions and rear ends were designed to achieve the preferred performance.

If you look at the torque and horsepower curve graph in your Shop Manual, you will see that both the 248 and 320 engines develop maximum torque at 2000 RPM, but that the curves are relatively flat from 500 or 600 RPM (curb idle speed) up to the 2000 point; that is to say, the engines have a good deal of low-speed torque, which is what the designers wanted, to achieve the sort of performance discussed above. Above 2000 RPM, the torque curves drop off more sharply. Horsepower rises more uniformly from 500 to 3200 RPM, where it peaks (roughly 62 MPH in a 40-series car).

Plainly, a four-speed transmission or overdrive unit would have enabled 1930s cars to "cruise" at lower RPM, with less engine noise and less overall wear on the car. I expect GM engineers played around with such notions, but ultimately rejected them. They would not have sold cars in those days. People did not want more gear-shifting; they wanted less. Buick engineers probably considered the adding of some sort of an overdrive to the torque-ball-and-tube arrangement they loved so well to be a desecration. Moreover, a number of gadgets and gimmicks, presumably intended to make driving easier and cars perform better, had been tried in the early 1930s and found wanting: "Startyx," the vacuum clutch, free-wheeling, "adjustable ride control," and several others all were abandoned, either because they were unreliable or because car buyers simply did not want cars with more levers and buttons and things to manipulate. (It is said that Packard had an adjustable ride control in the early '30s, controlled by a knob on

the dash. The knob was marked: "in hard - out soft." Apparently, no one at Packard thought that its customers would find a sexual allusion there.) No "road-test" report from the 1930s that I have ever seen complains about cruising speed, but many of them dwell on the cars' ability to accelerate smoothly from low speed in high gear.

\* \* \* \* \*

Special owners who, after reading all of this, are still troubled may investigate three possible modifications. One is to install the 3.9:1 Century ring and pinion: this is the simplest, but today is virtually impossible, because all the Century gearsets have already been found and put into people's cars. (There may still be some out there, but I guarantee you will need to do one hell of a lot of searching, or wait for some guy to die.) Another is to adapt an early '50s Dynaflow rear end to your car: this has been done, but it requires considerable modification, and I can't tell you how to do it. A third is to install a Borg-Warner overdrive unit. At least one member (Tony Weiss, #647) has done this successfully, but again, some modification will obviously be needed, and I don't know how to do this, either.

My personal opinion about Dynaflow rear ends and overdrives is negative, because they require modifications that are impossible to reverse without pirating parts from another car. Other people, however, do not have such compunctions. (Specials were sold in '37 and '38 with 3.9:1 rear ends, primarily for police work.) Any of the modifications will cause some fall-off in hill-climbing ability at highway speeds, so if you want to roll across the Penn Turnpike you may have to move over to the "slow-moving vehicle" lane on the big hills. (The overdrive unit can of course be de-selected to solve this problem.) You will also need to do a little more down-shifting into second, but that does not seem to bother most people. Before I undertook any modification, however, I would put enough miles on the car to enable me to decide whether I really wanted to do it.

### DELCO ELECTRICAL PARTS DATE CODES

Harry Logan (#651) has continued firing little nuggets of technicalia at me, albeit at a rate reduced somewhat from the earlier months of this year. (See "Harry's Helpful Hints," last issue.) Here is another nugget. The code number used by Delco-Remy on late '30s and early '40s starters, generators and distributors, stamped on the oval ID tag next to the part number, indicates the date of manufacture. The first digit indicates the year, the letter the month, and the final digit(s) the day. The month letters begin with "A" for January and go through "L" for December. Thus, "7C28" would be March 28, 1937, "8G6" would be July 6, 1938, etc.

### OPPOSITE PAGE

Many drivers had trouble getting a manual-transmission car back in motion after stopping on a hill -- and I suppose people still do. The "approved" method taught in the driving schools is to set the "hand" or "parking" brake and then release it as the clutch is engaged, but if the cables aren't properly adjusted and the hill is steep, this may not work, and some drivers couldn't seem to get it right. The "NoRol" device overcame these difficulties. It was not a GM "factory" accessory, but I'm sure it found its way into many Buicks, and was, I believe, "standard issue" on Studebakers. This shows how "NoRol" worked. (Thanks to David Bylsma (#117).)

# NoRoL



## HERE'S WHAT IT IS

NoRoL is a safety device—easily installed. It is a patented valve, automatically controlled by the angle of the car on a grade, and the clutch pedal.

## HERE'S WHERE IT GOES

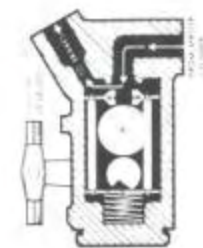
NoRoL, when installed, is interconnected with the braking system and the clutch pedal. It is out of sight, and does not alter the outward appearance of the car. There are no buttons or levers to operate.

# ... here's how it works

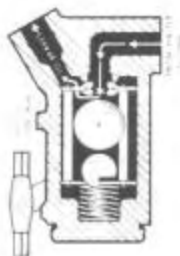
When stopping on any incline, no matter how steep, you simply apply the brake and disengage (throw out) the clutch in the usual manner. When the car comes to a complete stop, an automatic check retains the hydraulic pressure in the braking system which was developed when the brakes were applied. This hydraulic pressure holds the brakes applied as long as the clutch pedal is held depressed, en-

abling you to take your foot off the brake pedal and use it for accelerator duty... thus making it unnecessary to keep your right foot on the brake pedal while the car is stopped. It's like having a "third foot."

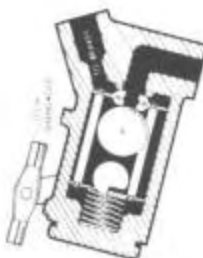
NoRoL actually becomes part of the car. It does not affect the normal use of the brake—and does not require you to learn any new driving habits.



**1** Illustrations numbered 1, 2 and 3 show how the NoRoL works. Cross-section sketch shows valve which consists of valve body, ball case containing ball and cam shaft. When the clutch is engaged, valve "B" is held away from seat "C", permitting free passage of brake fluid between brakes and master cylinder regardless of position of ball "A".



**2** In the illustration above, note the action that takes place in valve when clutch is disengaged (thrown out)... When clutch is disengaged, valve "B" is pressed against seat "C". Brakes may be applied or released while car is in forward motion. The NoRoL is not effective while car is moving forward.

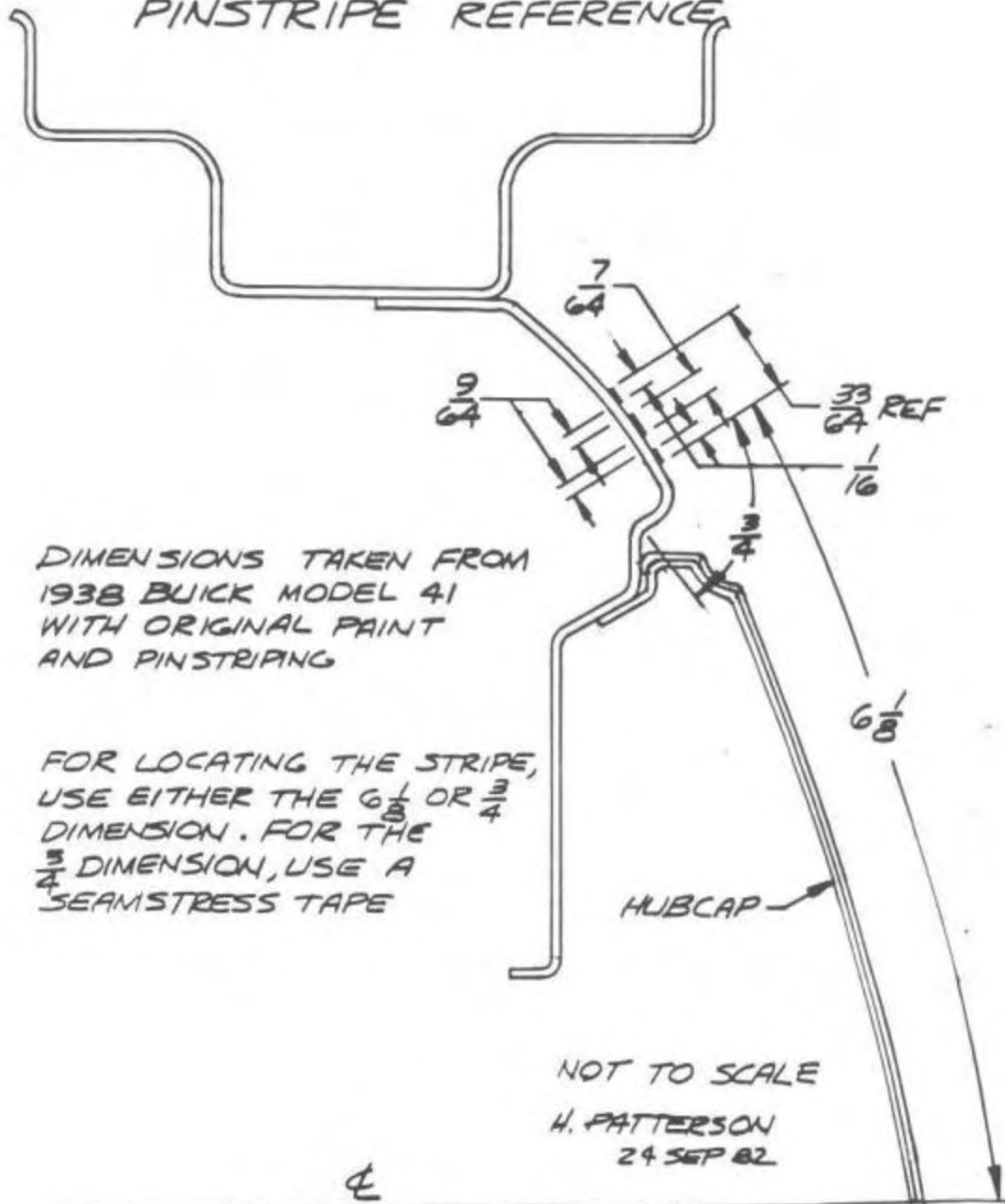


**3** With clutch disengaged and brakes applied on an up-hill stop, gravity will cause ball "A" to seat against valve "B". Brake pressure is held within the system after removal of foot from brake pedal. Engagement of the clutch releases brake pressure as the car is started.

## WHEEL STRIPES

Every few months I get a request for information on wheel stripes. The drawing, done by Hugh Patterson (#300) several years ago, shows the exact size and pattern of the stripes. It is not necessary, in my opinion, to get the sizes correct to 1/64 of an inch, but one should try to come as close as possible. There are various methods of applying the stripes, all of which are difficult, or extremely tedious, or both, and it is probably best to seek out a professional striper or sign-painter.

### 1938 BUICK WHEEL PINSTRIPE REFERENCE



## CARBURETOR & CHOKE REPAIR

By Harry Logan (#651)

I'd like to recommend Carburetor Engineering Co. of Pasadena, California for rebuilds of '37 and '38 Buick carburetors (AA-1 & 2; AAV-1 & 2). These carbs have the bolt-on automatic choke. All the other rebuilders told me to ship the carb minus the choke, as they do not rebuild chokes; Carburetor Engineering rebuilds both the carb and the choke, and has some of the choke parts. I believe they even have some vacuum switches. They rebuilt both an AA-2 and an AAV-2 for me and supplied a spring missing from one of the chokes. I visited their shop; it's quite extensive, with rows and rows of old rebuilt carbs. I believe they have been in this business for over 40 years.

Carburetor Engineering Co.  
3324 E. Colorado  
Pasadena, CA 91107  
818/795-3221



Another sad scene. Lewis Cohen (#584) was doing a little bushwacking in Connecticut when he came upon a '37 Special returning to the earth. "I don't think it can be saved," Lew said. I agree; in fact it looks like the left-overs from a parts car.



# Classified Ads



## PARTS FOR SALE

1937 & 1938, all series, reproduction center hood strip, stainless steel. Back in stock after a two year absence. These are the hood strips I first began reproducing 10 years ago. Difficulty in obtaining from supplier may result in this item no longer being available after this shipment is sold out. \$160. You must specify the year and model you desire. Please add something for shipping. Edward A. DePouli, 119 Hardenburgh Ave., Demarest, N.J. 07627. Note: Also available through Bob's Automobilia.

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1938 radio; sidemount tread covers. PAUL TEGTMEIER (#884). 21 Kitzbuhel Rd., Parkton, MD 21120. 410/357-8172

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1937 Special - hood ornament (pitted) - \$20; body moldings (some missing) - \$8 ea, \$50 all; hood - \$20. DON FALLS, 10779 Swan Creek Rd., Carleton, MI 48117. 313/586-2886 or leave message at 586-3323.

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1937-38 Series 80 and 90 upper and lower control arm pins and bushings. \$332.50 incls. shipping. Only 5 sets left. N.O.R.S. Prepaid only.

1937-38 Series 60-80-90 transmission countershaft and reverse idler shaft. \$95.00 incls. shipping. Only 7 sets left. N.O.R.S. Material 9310 R/C 60/62. Prepaid only.

Jack Corliss #279 (310) 925-3294  
5942 Hersholt Ave. 8:00 a.m. - 9:00 p.m. PST  
Lakewood, Ca. 90712

## PARTS WANTED

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1938 Special - inside mirror, valve cover, bumper badge, wiper arm mounts. PAUL TEGTMEIER (#884). 21 Kitzbuhel Rd., Parkton, MD 21120. 410/357-8172.

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1938 series 80 stainless running board trim, running board rubber, left rear fender with gas door, two wheels (poor condition OK), windshield and rear window rubber. WILLIAM ROSSITER (#947). 1325 Waterloo Ct., Riverside, CA 92506. 714/682-2096.

## CARS FOR SALE

1937 Century 4-door, plain back, model 67. New upholstery, windows, carpet, mat, steering wheel. Radio and heat. Needs dash/trim paint. Body very solid; great chrome; new wide white tires; paint poor to good. Steering loose but engine runs smoothly and car performs well. With finishing touches in place, this will be a strong and beautiful touring car. For more details see article "Coping with Adversity," TORQUE TUBE, Vol. VIII, No. 4. \$7,500. Darryl Comstock (#614) 6104 Nelson Place SW, Albany, Oregon 97321. Call 503/926-3670 (no Friday or Saturday calls).



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1938 Roadmaster 4-door sedan, with rare grille guard and bumper badge. This dark blue model 81 has only 2000 miles since restoration. Restoration includes, but not limited to, all new upholstery, carpet, headliner, rubber, windows, paint, reconditioned steering wheel, hand-finished woodgrain interior. Engine rebuilt and undercarriage redone, including new brakes and rebuilt front end. She purrs like a pussycat and has performed in a made-for-television mystery film. Asking only \$15,000. ROGER BAUMANN (#727). 5387 E. 39th Pl., Tulsa, OK 74135. 918/627-8421.



## CARS FOR SALE

1938 Roadmaster model 87. Extremely rare; one of only four known to exist per registries of BCA and 37/38 Club. Very low initial production; only 466 made. Solid rust-free California car needing full restoration. \$3500. Call for details. Can deliver. JOHN HARTER (#849). 31696 Ave. Evita, San Juan Capistrano, CA 92675. 714/493-7674. (X-9)

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1938 Special business coupe, model 46. Solid car. Rebuilt engine, shocks, and brakes; new wiring harness; many NOS parts. Lost storage. \$5000. JOHN KONSTANTINOS (#523). 7584 Hickory Lane, Kent, OH 44240. 216-677-4929. (X-9)

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1938 Special 4-door, model 41. Runs OK, brakes and tires OK. Body needs complete restoration; a few body parts missing. Asking \$1200. DON FALLS, 10779 Swan Creek Rd; Carleton, MI 48117. 313/586-2886 or leave message at 586-3323.

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## NEW MEMBERS

Richard Cole #944  
25 W 380 Armbrust Ave.  
Wheaton, IL 60187  
708/682-9317  
'37 40-C

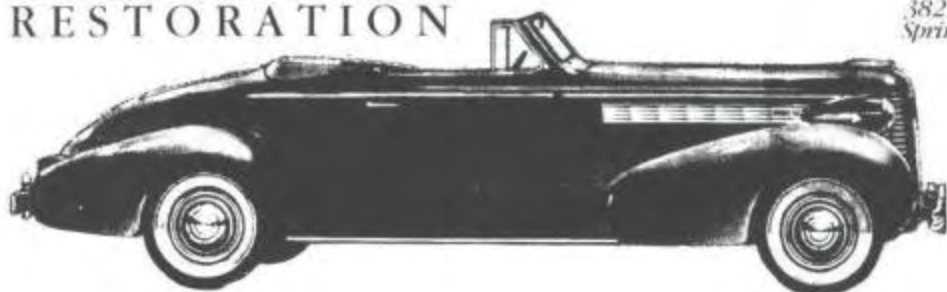
Robert H. Mitchell #946  
881 Brookpark Rd.  
Marion, OH 43302  
614/389-3808  
'37 41

Kirk Landmesser #948  
39 Mariciel Ave.  
Bayville, NJ 08721  
908/269-7929  
'37 40

Anthony Bracken #945  
7017 Cedar St.  
Huntington Park, CA 90255  
213/585-0665  
'38 41

William Rossiter #947  
1325 Waterloo Ct.  
Riverside, CA 92506  
714/682-2096  
'38 81

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## 1937-38 BUICK

FRONT FLOORMAT  
1937-38 SER. 40-60  
BLACK or BROWN  
FF-378.....\$175.



DOOR WEATHERSEAL-SPONGE  
GLUE-IN.....DW-378.....\$1.70ft.  
CLIP-IN.....DW-80.....\$2.00ft.



DOOR BOTTOM SEAL  
CLIP TYPE.....DW-369.....\$1.80ft



TRUNK SEAL-SEDANS. 1/2" WIDE  
SER. 80-90.....TW-371.....\$29.50  
SEDANS. 3/4" WIDE.  
SER. 40-60.....TW-371S.....\$29.50.



TRUNK SEAL-COUPES. 9/16" X 1" SPONGE  
.....TL-369.....\$2.00ft.



CLUTCH and BRAKE PEDALS SERIES 40-60  
BLACK.....CB-343BK.....\$5.00EA.  
BROWN.....CB-343BN.....\$5.00EA.  
SERIES 80-90.....CB-32BK.....\$7.50EA.  
BROWN.....CB-32BN.....\$8.50EA.



PEDAL FLOOR SEALS; ALL MODELS  
.....FS-375.....\$13.00PR.



1937 ONLY! ACCELERATOR PEDALS SERIES  
40-60 BLACK.....AP-37BK.....\$27.00  
BROWN.....AP-37BN.....\$29.00



SHIFT BOOT. 1937-38 SERIES 40 ONLY!  
BLACK.....SB-348BK.....\$8.75  
BROWN.....SB-348BN.....\$9.75



TIE-ROD ENDS. 1937-38 SERIES 40  
LEFT HAND THREADS TE-371L.....\$27.00  
RIGHT HAND THREADS TE-371R.....\$27.00



LOWER OUTER PIN KITS FOR SERIES 40-60  
.....LO-372.....\$35.00



FUEL PUMP KITS ; SER. 40 FK-24.....\$25.00  
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CARB. KITS: CARTER.....CK-360C \$25.00  
STROMBERG.....CK-37XS \$26.00



VALVES & LIFTERS SERIES 40-50;  
INTAKE.....V-944.....\$11.EA.  
EXHAUST.....VS-837.....\$11.EA.  
LIFTERS.....VL-1M.....\$9.EA.



TORQUE BALL SEAL KIT. ALL MODELS  
TBK-343.....\$26.00



VISOR/VANITY MIRROR. VM-369.....\$25.00



RUNNING BOARD RUBBER  
MATS. 1937-38 SERIES  
40 ONLY! REQUIRES SOME SPLICING ON INSIDE EDGE.  
RM-378.....\$424.00 PR.



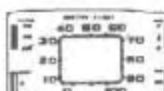
RUNNING BOARD INSULATORS. 1937-38  
ALL MODELS. ALL NEW MATERIAL! 4  
NEEDED PER RUNNING BOARD.  
RI-378.....\$20.00 EA.



HOOD REST PADS. 1937-38 6-8 PER CAR.  
HR-378.....4.00 EA.



DASH GLASS. SILK-SCREENED ON  
BACK OF GLASS IN COLORS AS  
ORIGINAL. 1937 SPEEDO.....DG-37.....\$38.  
.....RADIO.....RG-37.....\$23.  
.....CLOCK.....CG-37.....\$28.  
1938.....SPEEDO DG-38.....\$38.  
.....RADIO.....RG-38.....\$23.  
.....CLOCK.....CG-38.....\$28.



PLASTIC DASH KNOBS DK-37(38).....\$6.  
PLASTIC DOOR HANDLE and WINDOW  
WINDER RINGS..HE-37(38).....\$4.



OUTSIDE DOOR HANDLE CHROME ESC-  
HUTCHEONS and RUBBER GROMMETS.  
1 FERRULE & 1 GROMMET PER SET.  
1937 DGF-296.....\$5./SET  
1938 DGF-380.....\$5./SET



DOOR FERRULE INSTALLATION TOOL.  
\$20. REFUNDABLE IF RETURNED  
WITHIN 30 DAYS. DF-TOOL.....\$30.



1938 TRUNK HANDLE/LIGHT MOUNTING  
SEAL. DH-381.....\$8.50



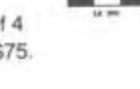
RUMBLE SEAT LATCH 1937-38  
DL-278.....\$65.



MOTOR MOUNT, FRONT. ALL MODELS  
ROUND PADS.....SP-338...\$10.PR.  
MOUNT.....MM-347..\$27.EA.



FRONT END BUMPERS;  
UPPER ALL.....UB-379...\$5.EA.  
LOWER.....LB-3X0...\$22.PR.  
1937 HUB CAPS. ALL SER..HC-37.....\$60.EA.  
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- Model 46
- Model 46S
- Model 47
- Model 48 (1937 only)
- Model 61
- Model 66
- Model 66S
- Model 67



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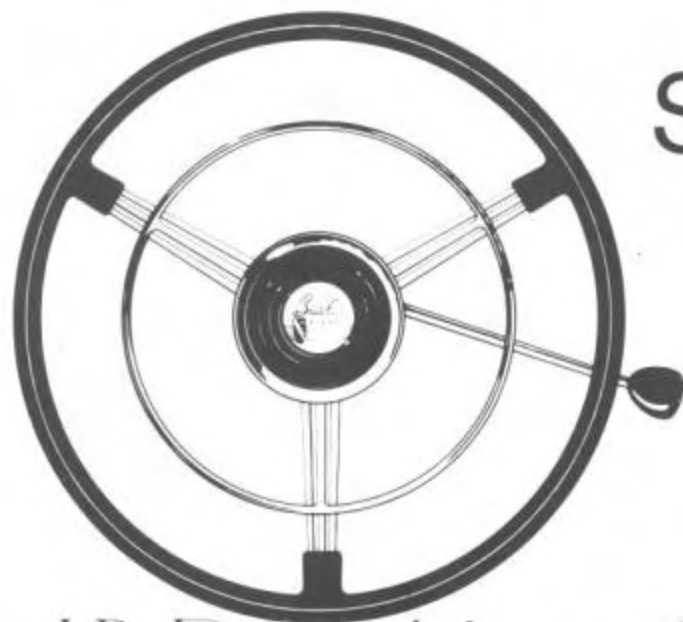


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5TH ANNIVERSARY of 1937-1938 BUICK MEET  
CROSSROADS VILLAGE  
FLINT, MICHIGAN  
SATURDAY, MAY 30, 1992



LET'S DO IT AGAIN!

Host motel is the Ramada Inn, located at I-75 at Pierson Road (Exit 122). Room rate is \$50.00. Make your own reservations at phone number (313) 732-0400. Mention 37/38 Buick Club.

For early arrivals, we have received a special rate for the Sloan Museum. Tours will be from 2 to 5 p.m., Friday, May 29, 1992. This museum features more than cars, and should be included in your plans. You'll be on your own for dinner Friday night.

Saturday we will leave the motel at 9:00 a.m. and drive to Crossroads Village. We have made arrangements with the village for free admission and two free train rides per car. We will have a buffet dinner at about 4 to 4:30 p.m.

There will be no flea market, but registrants are welcome to bring parts for sale or trade.

---

#### REGISTRATION

BCA # \_\_\_\_\_ 37/38 BUICK MODEL \_\_\_\_\_

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

Show registration and 1 meal \$ 15.00

         extra meals x \$10.00 +         

TOTAL \$         

REMIT NO LATER THAN MAY 15, 1992 TO: Marv Rhynard                      Bob Jones  
15330 Pinehurst                      or                      2523 Lanning  
Lansing, MI 48906                      Burton, MI 48509

Commemorative plaques will be part of the show registration.

